AP® HUMAN GEOGRAPHY
2011 SCORING GUIDELINES

Question 1

The map and table above show the geographic location, population growth, and projected growth of Mexico's most populous cities.

Part A (3 points)

Define the following terms and describe how each relates to Mexico's urban geography.

Primate city (1 point)
Magnitude (it is more than two times the size of the next-largest city) AND significance (it exerts social, political, economic dominance).

Rank-size rule (1 point)
Nth largest city is $1/n$ smaller than the largest city; more small cities, fewer larger cities.

Note: Do not grant credit if student misrepresents the proportion by saying ½ <u>for all</u> relationships.

Describe how each relates to Mexican urban geography (1 point)
Mexico does not comply with the rank-size rule (there is a poorly developed urban hierarchy because Mexico City is a primate city).   **OR** Mexico City is an example of a primate city because it is disproportionately larger than other Mexican cities and dominates the country.

Note: Either argument will earn the point, but students cannot contradict themselves.

Part B (4 points)

Explain TWO positive effects of primate cities on a country's economic development …

Positive effects (1 point each; total of 2 points)
- Advantages of agglomeration of economic activity.   - Large market for goods and services.   - Ability to offer high-end goods and services (including education) because of larger threshold population.   - Advantages of enhanced flow of information and ideas in large population.   - Advantages of centralized transportation and communication network.   - Global trade opportunities; primate cities can compete on a global scale and attract foreign investment.

Note: The response must focus on and explain the positive impact on <u>economic development</u>; for example, tourism in primate cities must be linked to economic benefits to the nation's economy.

… and TWO <u>different</u> negative effects of primate cities on a country's economic development.

Negative effects (1 point each; total of 2 points)
• Unequal distribution of investments deters national economic development.   • Unequal economic and/or resource development.   • Unequal distribution of wealth and/or power.   • Transportation network (hub and spoke) prevents equal accessibility to all regions.   • Impact of centrifugal forces and difficulties of political cohesion on economic development.   • Brain drain — migration and unequal distribution of education, entrepreneurship, opportunities.   • Disproportionate effect of disaster in the primate city on entire country.   • Negative externalities, e.g., unsustainable urban growth/slums/environmental impacts **if** these are related to economic development, e.g., burden on national economy to cope with problems.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

1A 1 of 2

1A) A primate city is a city in a state that is more than twice as big as another city in terms of population in that state. Since Mexico City has a population more than twice the other populated cities in Mexico, Mexico City is therefore a primate city. It was in 1975, in 2007, and is projected to be one in 2015. (10,000,000+ vs 1,000,000+ people)

✗ The rank-size ruler states that the n-th most populous ✗ city in a rank-sized economy/urban distribution will be $\frac{1}{n}$ th of the most populous city in terms of population. The 2nd most populous city in Mexico is Guadalajara with a 2007 population of 4,198,000 compared to Mexico City's 19,028,000. Since it is not half of Mexico City's population, Mexico therefore doesn't have a rank urban distribution that allows for even urban growth throughout the country. (This holds for 1975 and 2015 as well)

1B) Primate cities are booming economic centers. Mexico City provides Mexico with a way into the global economy and allows Mexico to attract the support of international companies. Primate cities offer many jobs for locals. Many people will migrate to Mexico City because of the jobs available there. They help to build up economic opportunities. Primate citys, however, make it difficult for other cities to develop. Because of the gap in population, Guadalajara can't compete with Mexico City and grow. Primate cities lead to the development of squatter settlements and areas of poverty. These areas cause major economic concern for governments to resolve.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

1A 2 of 2

1B) [Continued from 1st page] The large population in primate cities includes many poor people. These underclass cannot afford proper lodging, so they build squatter settlements. These developments drain resources from the government because it must address the social consequences / environmental consequences of such slums.

Since Mexico City is such a big city, it has great significance in the global economy (by the gravity model). Thus, primate cities give countries economic power in the global economy.

The large number of people implies a large number of services which leads to the positive effects of agglomeration. Businesses benefit from being located next to each other and by having such a wide pool of consumers.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

1B i of 2

A. A primate City is a City that is a center of economic business and trade, it is an exception to the Rank-size rule. The Rank-size rule states that the relation to the most populous City and 2nd most populous is $1/n^{th}$, "n" being the rank of the city in terms of population. An example would be, if a country's largest city had a population of 1 million, the second largest would be 500,000, 8 third largest approximately 333,333 and So on. Mexico City appears to be both a primate city, the capital and most populous. Since mexico City is the primate city, its population is well above the other cities so the Rank-size rule does not effectively apply.

B. A positive effect of primate cities is that it creates one large center of economic business in a country and with that a larger percentage of the population. This allows more employees to have jobs and increase income and the country's economy. Another benefit of primate cities is that they allow the population to be in different economic centers. This means that not everyone will only have one large centralized area of business and retailer services. It allows the population concentration to spread out over more cities rather than just the capital.

   A negative effect of primate cities is they develop more rapidly than other cities causing income inequality between regions in a country. Income inequality causes conflict in the country and slows down economic development because it will cause political conflict in which the government might have to take action on. Another ~~negative~~ negative effect is that it takes away attention from the nation's capital thus lowering national pride. If people are only attracted to the business

1   Write in the box the number of the question you are answering
on this page as it is designated in the exam.

1B 2 of 2

it lowers the chances of Some Migrants to move there.
An example of Mexico city being a prinmte city is the fact that it
had a population of 19,028,000 in 2007 but the 2nd largest was only
4,148,000, not what the Rank-size rule states.

Write in the box the number of the question you are answering on this page as it is designated in the exam.

IC 1 of 2
#1

A) A primate city is a city that is the largest city in a country and is atleast double the size of the second largest city. Mexico City is a primate city in Mexico, It has a projectected population in 2015 to be about 20,189,000 which is a little less than 5 times larger than the second largest city Guadalajara who's population is 4,673,000. The fact that Mexico City is that much larger than Guadalajara makes Mexico City a primate city. The Rank-size Rule goes along with a Primate City Meaning that as you go down the list the cities must be that many times smaller than the largest city. Meaning that the second largest City should be ½ that of the largest City, and the third largest city should be ⅓ of the largest cities population and so on. Mexico however does not follow the Rank-size Rule, Mexico City is to large for it to be even close to working, In any of the years shown half of Mexico city's population is no where

near the population of Guadalajara, which makes the Cule invalid for Mexico Right there.

B) Primate cities can positively affect the countries economic development by having a high labor force which means ~~that~~ more manufacturing, which then turns into money. Also primate cities are mainly where foreigners want to trade or Invest in, no matter where you are, the bigger the better. There are also negative affects of Primate cities such as cultural conflicts due to the amount of people there and also an Increase in slums or ghettos.

AP® HUMAN GEOGRAPHY
2011 SCORING COMMENTARY

Question 1

Overview

This question was intended to determine students' understanding of the model of urban hierarchy and its application to an actual system of cities. Rank-size rule and primacy are fundamental to the cities and urban lands use section of the course. The question asked students to provide definitions for rank-size rule and primate city and to determine which one best described Mexico's system of cities. They were then asked to provide a discussion of both the positive and the negative impacts of primate cities on a nation's economy.

Sample: 1A
Score: 7

The essay demonstrates a comprehensive understanding of primate cities, rank-size rule, and the effects that primate cities have on a country's economic development. It earned full credit in part A (3 points) and part B (4 points). In part A the response received 1 point for correctly stating that primate cities are more than twice the size of the next-largest city and for noting (at the beginning of part B) that they "are booming economic centers." The response was awarded another point for its definition of the rank-size rule: "the n-th most populous city in a rank-sized economy/urban distribution will be 1/nth of the most populous city in terms of population." One more point was earned for stating that Mexico "doesn't have a rank urban distribution." In part B the essay received 1 point for describing a positive effect of a primate city on economic development — that "Mexico City provides Mexico with a way into the global economy," which can attract international companies. It gained an additional point (at the end of the response) for explaining that "a large number of services … leads to the positive effects of agglomeration" and "a wide pool of consumers." The essay merited 2 more points for correctly identifying two negative effects: that "[p]rimate citys [*sic*] … make it difficult for other cities to develop" and that a primate city's squatter settlements "drain resources from the government because it must address the social consequences/environmental consequences of such slums."

Sample: 1B
Score: 5

The essay received full credit in part A (3 points) and partial credit in part B (2 points). In part A the response earned 1 point for correctly identifying a primate city as "a center of economic business and trade" and for stating that "its population is well above the other cities." It received an additional point for defining the rank-size rule thus: "the relation to the most populous city and 2nd most populous is 1/nth, 'n' being the rank of the city in terms of population." The response gained another point for categorizing Mexico City as a primate city. In part B the essay received 1 point for observing that one positive effect of a primate city is to create "one large center of economic business in a country." No additional point was granted, as the response focuses more on the definition rather than on the positive effects of a primate city. The essay was awarded 1 point for explaining a negative effect of primate cities: "they develop more rapidly than other cities causing income inequality between regions in a country." No additional point was earned for naming a negative effect, because the response incorrectly focuses on issues such as loss of national pride.

Sample: 1C
Score: 3

The essay received partial credit in part A (2 points) and partial credit in part B (1 point). In part A the definition provided for a primate city did not receive credit, as it discusses only the size and not the magnitude, significance, or dominance of the city within the country. The response earned 1 point for defining the rank-size rule by indicating that the lesser cities must be many times smaller than the largest city ("Meaning that the second largest city should be ½ that of the largest city, and the third largest city should be ⅓ of the largest cities [*sic*] population and so on"). The response was awarded another point for understanding that Mexico "does not follow the Rank-Size Rule." In part B the essay gained 1 point for noting, as a positive effect on a country's economic development, that "primate cities are mainly where foreigners want to trade or Invest [*sic*] in." No additional point was received for a positive effect, as the response incorrectly states that primate cities have "a high labor force, which means more manufacturing." No points were awarded for the explanations of negative effects, because the response incorrectly focuses on issues such as "cultural conflicts" that result from increased population.